INSTALLATION INSTRUCTIONS

AF12 IMPEDANCE MATCHING SYSTEM

Introduction

The AF12 is a 200 watts (RMS) impedance-matching system that allows the connection of up to 12 pairs of 8-ohm speakers to a single amplifier or receiver, while maintainging a safe operating impedance (nominal 8 ohms at the amplifier). Screw-less quick connectors allow for speedy installation of this device.

IMPORTANT: Turn your amplifier/receiver OFF before performing the following connection procedures

Amplifier Recommendations

It is possible to use the Sonance AF12 with an amplifier or receiver from any manufacturer provided the amplifier delivers sufficient power to drive the speakers. Because of the differences in amplifiers and receivers from any manufacturers, Sonance recommends using an amplifier with a minimum power rating of 50 watts per channel.

AF12 Placement

A major benefit of the AF12 is the versatility in placement options. Because there is no house current (AC) required for operation, it may be placed anywhere that is convenient. Make sure to place the unit somewhere that is accessible for servicing or wiring changes.

With no AC required, the AF12 can be installed anywhere that is convenient for connection of all speakers, for example, in a wall, attic, basement, utility room, soffits, and crawl spaces.

Wiring

Always use high-grade Sonance speaker wire. We recommmend using at least 18 gauge wire for runs of 50 feet or less, 16 gauge wire for runs of 50 – 100 feet, and 14 gauge wire for runs over 100 feet.

Source Connections

Connect the left and right speaker output of the receiver or amplifier to the left and right inputs of the AF12. Make sure to match positive (+) and negative (–) polarities. Simply strip off ½" of the wire jacket and push it into the screw-less quick connector. To remove a wire, simply push the black tab and pull the wire out.

Speaker Connections

Connect your first set of speakers to the terminals marked OUTPUT 1. Continue this process in succession for up to 12 pairs of speakers. Make sure to match positive (+) and negative (–) polarities.

Setting the Output Taps

The impedance of the speaker system is set manually by the installer. A set of output taps is located on the AF12 circuit board. The installer sets the proper position of the taps according to the total speaker impedance. Each impedance setting is shown (see *Figure 1*) with both an impedance value and speaker quantity for reference. Simply place the push connection into the desired location.

PAIRS OF 8-OHM SPEAKERS	TAP POSITION
2 – 3	4 OHMS
4 – 7	2 OHMS
8 – 12	1 OHM

Figure 1 - Impedance Chart

Using Other Than 8-ohm Speakers

If speakers other than nominal 8-ohm speakers are used in the system, it is necessary to calculate the total impedance of the speakers used.

When using an 8-ohm pair of speakers use the value **.125**

When using a 6-ohm pair of speakers use the value **.167**

When using a 4-ohm pair of speakers use the value **.25**

1. Add-up the valuse of the speakers in the system. For example, if the system had four pairs of 8-ohm speakers, one pair of 6 ohm speakers and one pair of 4-ohm speakers the formula would be:

   (4 x .125) + (1 x .167) + (1 x .25) = .917

2. Divide 1 by the result. The answer is the total resistance of the speaker system. **In the example, 1 / .917 = 1.09.**

For answers between:

8.0 and 4.0, the proper output tap position is the **4-ohm** position.

4.0 and 2.0, the proper output tap position is the **2-ohm** position.

2.0 and 1.0, the proper output tap position is the **1-ohm** position.

Specifications

Power Rating:	200 Watts RMS/channel; 350 Watts program/channel
Switch Type:	12-Position light-touch silent rotary switch
Terminal Type:	Screwless quick connectors (12ga – 18ga)
Frequency Response:	20 – 20kHz ±1dB
Speaker Impedance:	6 – 8 ohms
Dimensions (WxHxD)	
Chassis:	10½" x 14" x 3⅞" (267mm x 356mm x 98mm)
Sub-chassis:	8 3/16" x 12½" x 3¾" (224mm x 318mm x 94mm)
Coverplate:	12" x 15½" x 5/16" (305mm x 394mm x 8mm)
Shipping Weight:	25 lbs (11.4kg)

Technical Assistance and Service

If you have any questions about the operation or installation of this product, please call our Technical Assistance Department on any business day at (800) 582-0772 or (949) 492-7777; from 7 a.m. to 5 p.m., Pacific Time.

If your unit should need repair or service, contact your Sonance Authorized Dealer for help, or use the following procedure:

1. Prior to calling Sonance, note the product's model number, serial number, purchase date, and the name and address of the dealer where you purchased the product.
2. Contact our Technical Assistance Department at the above number(s) and describe the problem the unit is experiencing. If they determine that the product requires service, they will transfer you to our Customer Service Department, who will issue you a Return Authorization (RA) Number.

Important: You must have prior authorization to return your product to Sonance!

3. If you're directed to return the unit to Sonance for repair, pack the unit in its original shipping carton. If needed, you can obtain replacement packaging from us for a small charge. Note: it is best if you place the box into an additional outer "overcarton" before shipment to minimize a chance of theft in shipment. Please include a copy of the original bill of sale inside the package.
4. Contact a package delivery service such as United Parcel Service or Federal Express to arrange prepaid (not collect) shipping. Do not use the U.S. Postal Service.

Important: Freight collect shipments will be refused.

5. Write the Return Authorization Number on the outside of the shipping carton.

6. Ship the packaged unit to:

   Quality Assurance Department
   Sonance
   212 Avenida Fabricante
   San Clemente, CA 92672-7531

Limited Warranty Coverage (U.S.A. Only)

If, within five (5) years from the date shown on the bill of sale, the unit fails, due to a defect in workmanship or material, Sonance will, at its option and at no charge, repair or replace the components of such unit which prove to be defective.

For this warranty to be effective, the bill of sale must show that the unit was purchased from an "Authorized Sonance Dealer" and must list the price paid. This warranty shall apply exclusively to the original purchaser and shall not apply to units purchased for industrial or commercial use.

Furthermore, this warranty shall not apply if:

1. Damage to the unit was caused by accident, abuse, or misuse;
2. The unit was opened, modified, or repaired by unauthorized personnel; or
3. The unit was not used as outlined in the operating instructions.

Exclusions and Limitations

The warranty set forth above is in lieu of all other warranties, express or implied, of merchantability, fitness for a particular purpose, or otherwise. The warranty is limited to Sonance products registered herein and specifically excludes any damage to loudspeakers and other allied or associated equipment which may result for any reason from use with this product.

Sonance shall, in no event, be liable for incidental or consequential damages arising from any breach of this warranty or otherwise. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

©2007 Sonance. All rights reserved. Sonance is a registered trademark of Dana Innovations.

Due to continuous product improvement, all features and specifications are subject to change without notice.
For the latest Sonance product specification information visit our website: www.sonance.com

SONANCE • 212 Avenida Fabricante • San Clemente, CA 92672-7531 USA

(800) 582-7777 or (949) 492-7777 • FAX: (949) 361-5151 • Technical Support: (800) 582-0772

www.sonance.com

33-3052 06/07